**Standards for Mathematical Practices**

**from the Common Core**

1. **Make sense of problems and persevere in solving them.**

Mathematically proficient students…

* understand the context of the problem.
* plan a solution strategy.
* use manipulatives or pictures to represent the problem.
* monitor their thinking as they solve the problem.
* are flexible in approaches to solving problem (when one doesn’t work, try another).
* make connections to similar problems.
* determine reasonableness of an answer.
* understand the strategies of other students.
* make connections between strategies.

1. **Reason abstractly and quantitatively.**

Mathematically proficient students…

* demonstrate number sense.
* translate concrete and pictorial representations into symbols.
* provide real-life context for a number expression or equation (e.g. create a story problem for 3 x 5).
* recognize the meaning of the answer.

1. **Construct viable arguments and critique the reasoning of others.**

Mathematically proficient students…

* formulate an argument (e.g. How did I get my answer? Will this strategy always work?).
* communicate their strategy using pictures, numbers, or words.
* justify their conclusion (i.e. How do I know my answer is correct?).
* make conjectures based on what appears to be correct and has not yet been disproven.
* ask questions of others to clarify thinking.
* compare effectiveness of strategies.

**4. Model with mathematics.**

Mathematically proficient students…

* recognize mathematics in every day life.
* make estimations to simplify the situation.
* use diagrams, graphs, and charts to identify key ideas and draw conclusions.

**5. Use appropriate tools strategically.**

Mathematically proficient students…

* effectively use a variety of tools.
* identify which tools are appropriate in a given situation.
* use technology to deepen understanding.

**6. Attend to precision.**

Mathematically proficient students…

* communicate precisely using symbols or words.
* use vocabulary and commonly agreed upon definitions in discussions.
* calculate accurately and efficiently.

**7. Look for and make use of structure.**

Mathematically proficient students…

* discern a pattern to identify rules or properties.
* separate complicated ideas into their individual parts.

**8. Look for and express regularity in repeated reasoning**.

Mathematically proficient students…

* generalize from patterns noticed.
* look for more efficient strategies.
* identify general methods or a general formula.
* evaluate reasonableness while working the problem.